Sri Datta Budaraju

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EDUCATION

KTH ROYAL INSTITUTE OF TECHNOLOGY — Aug 2018 - March 2021 | Stockholm, Sweden

MSc in Computer Science, Machine Learning Major

Coursework - Advanced Deep Learning, Proj. course in Robotics and Autonomous Systems, Proj. course in Data Science, Deep Learning, Speech and Speaker Recognition, Speech Technology, Artificial Intelligence, Machine Learning

AMRITA SCHOOL OF ENGINEERING — Aug. 2015 - July 2018 | Coimbatore, India

BTech in Computer Science | Cum. GPA: 8.63 with Distinction

Coursework - Intelligent Systems, Digital Image Processing, NLP, Python, Probability, Optimization, Embedded Systems

EXPERIENCE

VOLVO CARS | Software Developer — Aug 2021 - Present | Gothenburg, Sweden

- Automated resource provisioning with Ansible, along with monitoring and alert management with Prometheus and Grafana.
- Implemented automated acceptance tests using Robot Framework and Python.

MERCEDES BENZ | Thesis Research Intern — June 2020 - Dec 2020 | Stuttgart, Germany

- Developed novel unsupervised learning approaches for 3D Human Pose Estimation using VAE-GAN hybrid networks
- First 2D-to-3D pose lifting approach that is scalable to the real-world while achieving the SOTA performance

KTH FORMULA STUDENT | Lead Perception Engineer — Oct 2018 – Dec 2019 | Stockholm, Sweden

- Contributed to lidar and camera based detection and calibration modules from data collection to real-world testing phases
- Led the perception pipeline and received good feedback in the world's largest engineering design competition, FSG 2019

AMUDA LAB | UG Researcher — March 2017 – March 2018 | Coimbatore, India

- Explored and experimented with novel techniques to accurately localize mobile devices in dense indoors settings
- Data collection, implementation and testing of triangulation algorithms on dual band WiFi and low energy Bluetooth signals

PROGRAMMING SKILLS

LANGUAGES Python, Java, MATLAB, C/C++

FRAMEWORKS PyTorch, Keras, TensorFlow, Spark, Kafka

MISC. Git, Jupyter, GCP, Ansible, ROS, Linux, Latex

LIBRARIES Numpy, OpenCV, Pandas, Matplotlib, TKinter

PROJECTS

BINARIZED NEURAL NETWORK OPTIMIZATION | PyTorch — Oct 2019 – Dec 2019

- Reproduced Neurips19 paper, "Latent Weights Do Not Exist" from scratch including binary layers and optimizers
- Our team obtained ∼ top 10 review scores out of 80+ final submissions for the NeurIPS19 Reproducibility Challenge

YOUTUBE TRENDS | PySpark, Kafka — Sept 2019 – Oct 2019

- Built a scalable pipeline for live YouTube data analysis and visualization. A Kafka broker is used to stream the queries results
- The stream is processed using PySpark. A dashboard reads the results stored in a warehouse for simultaneous visualization

DEEP IMAGE COLORIZATION | Keras, TensorFlow — Apr 2019 – Jun 2019

- Implemented a bi-headed autoencoder that colorizes grayscale images, using a pretrained ResNet as the extra head
- The Resnet head represents low-level image features while encoder learns the features crucial for the colorization task

CLASSICAL PIANO COMPOSER RECOGNITION | Keras, TensorFlow — Mar 2019 – Jun 2019

- Analyzed the correlation between the composers using Mel-scaled spectrograms of piano music in Magenta Project dataset
- Experimented with KNN, RNN, LSTM, and GRU to learn the temporal information for this previously unexplored task

OBJECT DETECTION FOR AUTONOMOUS DRONE | ROS, OpenCV, Python, YOLO — Feb 2019 – May 2019

- Created a dataset of 15 traffic signs from drone footage and integrated the trained YOLO in ROS for inference on live feed
- Extracted edges of the signs in the detected bounding box and used Perspective-n-Point to estimate their 3D global position

PUBLICATIONS

[1] B. S. Datta, R. Ganapathy, S. R. P, S. K. Vasudeva, and A. SN. An inventive and innovative alternate for legacy chain pulling system through internet of things. *Indonesian Journal of Electrical Engineering and Computer Science*, 6(3):688, June 2017.

[2] B. Sri Datta, K. V. Shriram, and V. Sucharitha. A real-time novel road safety system pertaining to indian road condition. *International Journal of Advanced Intelligence Paradigms, In Press*.